

EXPERIENCING WINDOWS NT FOR ACCELERATOR CONTROL SYSTEMS

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At the INFN-LNS a big effort is produced to improve and upgrade the accelerators control system. The new projects and facilities under development give us the opportunity to re-design the architecture of the old control system in order to match the new technologies nowadays available. The most innovative characteristic of the new design is the use of PCs running Windows NT at any level of the architecture. It is the application software that characterizes the functional role of the machine and not the hardware configuration. Considering the relative young age of Windows NT, especially in accelerator control systems, it is important to evaluate very carefully its behavior in terms of functionality, reliability, system management, performance and security. On the other side, it is well known that a wide choice of programming languages and instruments drivers is available for this operating system. Moreover, a dedicated communication driver based on a client-server model was also developed in order to optimize the management, the reliability and the security of the data exchange over the network. We will present the architecture including the Control Local Area Network, the preliminary results of an extensive testing of the overall performances and an evaluation about the general versatility of the architecture itself.